

**Draft Summary of the Engineering and Operations Work Group Meeting
Oroville Facilities Relicensing (FERC Project No. 2100)
September 26, 2003**

The Department of Water Resources (DWR) hosted the Engineering and Operations Work Group (EOWG) meeting on September 26, 2003 via videoconference between the Joint Operations Center in Sacramento and the Oroville Field Division in Oroville.

A summary of the discussions, decisions made, and action items is provided below. This summary is not intended to be a transcript, analysis of the meeting, or to indicate agreement or disagreement with any of the items summarized, except where expressly stated. The intent is to present an informational summary for interested parties who could not attend the meeting. The following attachments are provided with this summary:

Attachment 1 Meeting Agenda
Attachment 2 Meeting Attendees
Attachment 3 Butte County PM&E Package for EOWG
Attachment 4 Map of Thermalito Afterbay to accompany Butte County PM&E #3
Attachment 5 Summary of Potential Model Runs, revised September 18, 2003
Attachment 6 Oroville Elevation Study

Introduction

Attendees were welcomed to the EOWG meeting. The meeting agenda and desired outcomes were reviewed. The meeting agenda and list of meeting attendees and their affiliations are appended to this summary as Attachments 1 and 2, respectively.

August 29, 2003 Meeting Summary and Action Items

A summary of the August 29, 2003 EOWG is posted on the relicensing web site. The EOWG reviewed the status of action items from that meeting as follows:

Action Item EO#82:	Send electronic copy of Resource Action Information Form to Bill Lewis, Yuba City.
Status:	The Facilitator completed this action item.
Action Item EO#83:	Confirm status of PMF determination and report back to EOWG.
Status:	Rashid Ahmed, DWR Engineering Resource Area Manager (RAM) reported that the PMF study would be completed soon. See detailed discussion below under Review of SP-E4.
Action Item EO#84:	Distribute Flood Management Presentation electronically to EOWG.
Status:	Ted Alvarez with DWR reported that the presentation was distributed electronically and will re-send it to Ken Kules representing Metropolitan Water District.
Action Item EO#85:	Distribute electronically to EOWG for comment an annotated Modeling Workshop outline with detailed approach to the use of group breakouts, key issues, etc.
Status:	Curtis Creel, DWR Operations RAM reported that this task is underway and a draft outline will be distributed to the EOWG for review early next week.
Action Item EO#86:	Update the summary of model runs to include new information and provide a new draft to the EOWG.
Status:	See discussion of updates below.
Carry Over	
Action Item EO#80:	Develop draft Engineering and Operations Matrix similar to Environmental Work Group matrix.
Status:	Curtis Creel reported that this task is underway and he expects to distribute a draft to the EOWG in advance of their next meeting for review.

Action Item EO#81: Coordinate with Environmental Work Group to clarify modeling scenarios 12 and 17 and obtain additional information from Fisheries Task Force regarding questions to be answered by modeling effort.

Status: Curtis reported that this task is ongoing and he is awaiting information from the Fisheries Task Force.

Review of SP-E4 Deliverables

Rashid Ahmad led a discussion on the SP-E4 flood management study plan. He explained that the draft report is under internal review right now and he expects it to be distributed soon. Kathy Petersen representing South Feather Water and Power indicated they are starting their own PMF study and expect it to be done by April 2004. She expressed the desire to coordinate with the information developed by DWR as a part of SP-E4. Rashid confirmed that the study used HMR58, a new model developed and calibrated that appears to be accurate within 3% of predicting peaks from historic data set. He added that DWR is incorporating information learned from studying a Bucks Lake failure and will include updated flood inundation maps. Rashid will follow-up on the report schedule and report back to the EOWG on when the report will be available for review.

The EOWG discussed additional work requested by several stakeholders that DWR felt should be worked on outside of the relicensing collaborative. One of those activities is evaluation of changes to flood operations of the Oroville Facilities. Curtis reported the Department is working with the U.S. Army Corps of Engineers as well as the Yuba County Water Agency to review and update the operations manual for both the Oroville Facilities and New Bullards Bar. As part of that process, the three agencies will evaluate travel times, ramping rates during storm events, and flow-stage relationships. In addition, the Department is cooperating with YCWA on its four-year pilot project to investigate the use of forecasted based operations.

Rashid Ahmad reviewed the contents of the SP-E4 report and Bill Lewis representing Yuba City suggested that the contents do not address the tasks as outlined in the Study Plan. He described the draft report as a baseline study and incomplete because it doesn't evaluate options as indicated in the Study Plan tasks. The EOWG discussed the Study Plan development process and agreed that for the most part, the studies were not designed to evaluate specific PM&Es but rather to provide information related to the impacts of current project operations on the affected environment. Curtis agreed to review the report and the Study Plan with DWR management to confirm that the Study Plan scope and tasks are being completed and ensure that the study methodology has not been changed. Ken Kules representing MWD noted that any methodology change should be reviewed and approved by the EOWG but also suggested the group focus on development of potential PM&Es to achieve the goals and evaluate them as specific proposals rather than collect more general information on numerous options that may not be appropriate. He asked the stakeholders interested in flood management strategies to provide a range of alternatives that might meet their goals so the EOWG can focus their discussions and make efficient use of time.

Resource Action Discussion – Butte County Proposed Resource Actions

Stuart Edell representing Butte County distributed a document containing three Butte County Proposed Resource Actions to the EOWG (Attachment 3). PM&E#3 (Butte County numbering system) involves construction of physical barriers within and adjacent to the Thermalito Afterbay and operational changes to achieve warmer water for agricultural irrigation delivery. Stuart distributed a map that showed the location of the old Western Canal within the current Afterbay (Attachment 4). Temperature modeling would be necessary to see if an exterior channel would be feasible. The group discussed the potential to take advantage of thermal stratification within the Diversion Pool and the potential for turbulence to break down any stratification between the radial gates and the hatchery conduit.

Butte County PM&E # 10 involves an early warning and evacuation system for downstream areas and is intended to provide correct information in an accurate and timely fashion through the Office of Emergency Services (OES) during a flood event. It is also intended to provide information (such as water level and travel times) to assist in planning evacuation strategies before a flood event happens. Both Stuart Edell and Bill Lewis will provide additional details to describe the actions envisioned to be included in this PM&E.

Ed Craddock representing Butte County presented PM&E 11, which involves thinning 'ladder fuels' within the watershed to reduce the intensity of wildfire and to improve the quality and quantity of runoff within the watershed. The PM&E includes funding for the development of a watershed model for the Feather River watershed and numerous others recharging the Butte Groundwater Basin, monitoring activities, application of fuel load reduction techniques, and economic development. The EOWG discussed the regional coordinated effort that would be necessary to succeed with watershed based planning and noted the dollars currently available from the DWR's Division of Planning and Local Assistance. Curtis Creel identified this PM&E to forward to the Land Use, Land Management and Aesthetics Work Group (LUWG), which has completed a Study Plan on fuel load management options that might help address this issue and added that the EOWG would provide any necessary modeling support. The Facilitator reminded Ed that Rob MacKenzie is representing Butte County in the LUWG and would be a good contact for continued involvement with this PM&E.

Revised Modeling Scenarios

The EOWG reviewed the most recent summary of potential model runs (Attachment 5). Curtis explained that the benchmark runs of HYDROPS optimized pump-back and utilized it more often than DWR actually does. He described Scenario #20, which has been designed to model pump-back operations that are nearer the levels observed historically. The EOWG agreed that this scenario should be a level 2 priority run and be considered at the same time as the scenario designed to flatten generation (Scenario 2). Curtis noted that Scenario 2 results would not be available for the next modeling workshop.

Art Hinojosa presented graphics that depict results from Scenario 13 runs designed to evaluate impacts of water supply demands on lake levels (Attachment 6). The EOWG discussed revisions to make the graphs clearer including revising the locations of the boat ramps to reflect recent extension work completed. Art explained that the graphs are intended to show what effect the new Delta Standards have had on Oroville lake levels during various water year types. The EOWG suggested several changes. Art will revise the graphs and distribute them electronically to the EOWG for review.

Next Steps

The EOWG agreed to set an EOWG task force conference call meeting (with potential for a video conference if the JOC and OFD are available) from 10 a.m. to 12:00 p.m. on October 10, 2003 to discuss specific details regarding Butte County's PM&E 310. If time permits, the Task Force meeting will also allow participants to discuss actions related to flood management options. The next EOWG meeting is scheduled for:

Date: October 31, 2003
Time: 9:00 a.m. – 2:00 p.m.
Location: Oroville Field Division

Action Items

The following action items were identified by the Engineering and Operations Work Group and includes a description of the action, the participant responsible for the action, and due date.

Action Item EO#87: Follow-up on the PMF report schedule and report back to the EOWG on when the report will be available for review

Responsible: DWR

Due Date: October 31, 2003

Action Item EO#88: Review the SP-E4 report and Study Plan to confirm that the Study Plan scope and tasks are being completed and ensure the Study's methodology has not been changed

Responsible: DWR

Due Date: October 31, 2003

Action Item EO#89: Provide additional detail to describe the actions envisioned to be included in Butte County PM&E#10, early warning for improved flood protection.

Responsible: Butte County/Yuba City

Due Date: ASAP

Action Item EO#90: Transfer watershed PM&E to the LUWG and coordinate modeling needs.

Responsible: DWR

Due Date: October 31, 2003

Action Item EO#91: Revise the graphs associated with Scenario 13 and distribute electronically to the EOWG for review.

Responsible: DWR

Due Date: October 31, 2003

CARRY OVER

Action Item EO#85: Distribute electronically to EOWG for comment an annotated Modeling Workshop outline with detailed approach to the use of group breakouts, key issues, etc.

Responsible: DWR

Due Date: September 26, 2003

Action Item EO#80: Develop draft Engineering and Operations Matrix similar to Environmental Work Group matrix.

Responsible: DWR/Consulting team

Due Date: September 26, 2003

Action Item EO#81: Coordinate with Environmental Work Group to clarify modeling scenarios 12 and 16 and obtain additional information from Fisheries Task Force regarding questions to be answered by modeling effort.

Responsible: DWR/Consulting team

Due Date: September 2003